

# **Montana's Energy/Resource Developments Under Governor Schweitzer**

## **Wind Projects**

### **Wind Farms**

#### **Judith Gap Wind Farm – October, 2005**

The Judith Gap wind farm owned by Invenergy is located six miles south of Judith Gap in Wheatland County. The Helena Independent Record reported in a news article on January 12, 2005 announcing the project's power purchase agreement said that Gov. Brian Schweitzer, who made wind power a major part of his platform for governor, said: "It's a great start." On October 7, 2005, the Judith Gap Wind Farm was dedicated. The wind farm is equipped with 90 GE turbines rated a 1.5 MW capacity each. This 135 MW wind farm is the states largest with a proposed expansion of 35 turbines. The increase would add nearly 40 percent power-production capacity. The Judith Gap Wind Farm has proven to be one GE's best performing sites in terms of wind capacity factor.

#### **Horseshoe Bend Wind Park – January, 2006**

This wind farm, located near Great Falls, will produce an estimated 9 megawatts of electricity from six 1.5 MW turbines, enough to power about 2,400 homes a year. The Horseshoe Bend project is built on a site less than an acre in size at a gravel pit and construction was completed in early 2006.

#### **Glacier Wind Farm – July, 2008**

NaturEner USA began construction in 2008 on 507 MW of wind power generation near Shelby. Governor Schweitzer spoke at the official ground breaking of the first phase on July 17, 2008, which will be operational by the end of October 2008. Located in the hills between Cut Bank and Shelby, the first phase of the planned 210 MW wind farm will generate 106.5 MW. Another 103.5 MW are planned in phase two to be constructed in 2009. NaturEner plans to build an additional 300 MW of generation capacity in 2009 at another nearby wind site known as the Rim Wind Farm to connect to the Montana Alberta Tie Transmission Line also slated to be constructed in 2009.

**Diamond Willow Wind Farm - January, 2008**

Montana Dakota Utility's Diamond Willow wind farm near Baker was completed in 2008 and includes 13 turbines with a total capacity of 19.5 MW. The wind farm will produce enough have the capacity of energy to power 7,000 residences.

**Wind Hunter Wind Farm - September, 2008**

Originally planned for 500MW near Glasgow by wind developer GreenHunter Energy, the developer is planning to install 3 MW (two 1.5 MW Chinese manufactured turbines) at the site in 2009 for testing purposes.

**Madison Valley Renewable Energy – September, 2008**

This project has been given permission from the Madison County Commissioners to erect eight additional test towers on Norris Hill near Ennis. The company has leased enough ground to eventually produce 150 MW.

**Sagebrush Energy – September, 2008**

This company will build eight wind generators in the Norris Hill area near Ennis. They plan to begin building after they complete 18 months of wind data to assure investors and landowners that the project is well-suited for the area.

**Wind Programs****Wind for Schools in Montana and the Wind Application Center at MSU – May, 2008**

The US Department of Energy has selected Montana as one of five states to participate in the inaugural year of the Wind for Schools Program (WfS). The objective of Wind for Schools is to engage rural America in a discussion of wind energy while encouraging the growth of a knowledge and skill base for development of the wind industry. A 1.8 kW wind turbine will be erected this year at MSU to educate students, teachers and community members in wind energy through curriculum development and integration. In addition, NorthWestern Energy has awarded WfS a grant of \$46,000 to begin to implement the Program the fall of 2008. The Governor's Office worked closely with MSU to obtain this grant

**Cascade County Shop – July, 2008**

A new energy efficient County shop was erected in the summer of 2008 in Cascade County and the facility hosts an Entegriy Wind Systems 50-kilowatt wind turbine. The wind turbine will produce an estimated 85% of the county shop's electrical needs and can generate as much power as 12 households would need for one year.

## **Other Electrical Power Plants**

### **Basin Creek Power – April, 2005**

The Basin Creek Power natural gas fired power plant in Butte was constructed in 2005 and produces 51+ MW of peaking power.

### **Centennial Power Plant – April, 2006**

This 119 MW pulverized coal power plant went on line in April of 2006. The Hardin Generating Station has the distinction of being the cleanest burning coal plant in Montana and is the first pulverized coal plant to be built in that state in over 20 years.

### **SME Power Plant (Highwood Station) – September, 2008**

This proposed Circulating Fluidized Bed (CFB) 250 MW coal fired power plant received applicable state permits within the last 2 years. Construction is awaiting resolution of legal challenges to the permits.

### **Anaconda Regulating Plant -- September, 2008**

NorthWestern Energy announced in the winter of 2008 its plans to construct a natural gas fired peaking generator plant near Anaconda. The company has filed permit applications with the DEQ and PSC. The 200 MW plant will be built in two phases consisting of three 50 MW Pratt and Whitney turbines in the first phase with a second phase to be built later. NorthWestern is eyeing to market this as firming power for future Montana wind farms and plans to have it up and running mid to late 2010.

### **Culbertson Peaking Plant -- September, 2008**

Basin Electric Power Cooperative is developing a 100 MW natural gas fired peaking plant in Culbertson. Montana DEQ Air Quality permitting and EA preparation are expected to be completed summer 2008, with an RUS FONSI issued in early fall 2008. Construction would follow immediately after permitting. They are looking at commercial operation in summer 2009.

### **Great Falls Energy Center -- September, 2008**

Montgomery Great Falls Energy Partners LP, an affiliate of Montgomery Energy Partners LP of Magnolia, Texas, formally announced the purchase of assets and permits for Montana First Megawatts from Northwestern Energy. The gas-fired, combined cycle power plant project has been permitted to produce 275 megawatts and could easily be expanded for an additional 275 megawatts. The company is working on permit for second plant; a \$96 million single cycle peaking plant.

### **Rainbow Dam Hydropower Project – September, 2008**

PPL Montana is undertaking this project to raise the existing Missouri dam located near Great Falls 1.5 feet and installs new turbines that will add 60 MW of

clean power. The project cost is estimated at \$175 million and PPL expects to sign construction contracts in November 2008.

### **Gibson Dam Hydropower Project – September, 2008**

The Gibson Dam on the Sun River on the Rocky Mountain Front near Augusta was originally built in the 1920's and it was designed for electricity generating turbines but they were not installed. Toll House of Bellingham Washington is conducting this \$25 million project to install the long awaited turbines. The developer is finalizing approvals as of late summer 2008 and the plant will produce 15MW of power.

## **Infrastructure Projects**

### **Transmission Lines**

#### **Havre to Rainbow and Wolfe Point to Williston Transmission Upgrades – 2006/2008**

These two Western Area Power Administration (WAPA) projects will upgrade the existing line from 161 kV to 230 kV. Wolfe Point to Williston was permitted in 2006 and Havre to Rainbow was permitted in 2008 and both projects will involve transmission improvements constructed over a 10 year period.

#### **MATL – May, 2005**

The Montana Alberta Tie Line (MATL) is the proposed 600 MW, 215 mile merchant (private) transmission line that would connect Great Falls and Lethbridge, Alberta. The Governor's Office has tracked the permitting process closely and the project developer is expected to complete the process the fall of 2008 and the line is slated to be constructed in 2009.

#### **Northern Lights – October, 2006**

TransCanada's NorthernLights Inland Project is a proposed 800 mile high voltage Direct current (HVDC) transmission line connecting Townsend to Las Vegas, Nevada, with potential expansion to Los Angeles and Phoenix. The project will use 500kV bi-pole lines to minimize land impact and provide for a total capacity of 3000 MW. The Governor signed a Memorandum of Understanding with the states of Idaho and Nevada concerning the development of this project in 2006.

#### **MSTI -- September, 2008**

Mountain States Transmission Intertie (MSTI) is a proposed project from NorthWestern Energy to provide 1,500 MW of new transmission capacity. The company submitted permit applications to the state the first of July 1, 2008. It is a 500 kV transmission line that would relieve constraints on higher-voltage systems and provide west coast market access to new Montana power

generation projects. The project would be built between substations located near Anaconda and Jerome Idaho with an in- service date of 2011.

### **BPA / Colstrip 500 kV Transmission Line Upgrades – September, 2008**

NorthWestern Energy is in the process of commissioning technical studies on a project to increase the capacity of the existing high voltage transmission line from Colstrip to the west coast by up to 750 MW. NorthWestern is working with EIPD, Pacific Corp, Puget Sound Power, Portland Electric and BPA. Funding agreement studies to move this first phase forward are expected to be done in early 2009.

## **Pipelines**

### **Enbridge Oil Pipeline Expansion – 2006**

Governor Schweitzer urged the convening of a meeting with the Governors of North Dakota and Wyoming in 2006 to address oil pipeline bottlenecks that were forcing Montana oil producers to take major price discounts. In part as a result of this action taken by Governor Schweitzer, Enbridge is making improvements to the existing crude oil pipelines that serve Eastern Montana that will give Montana producers better market access. The "North Dakota System Expansion Phase 6 Project" (consisting of certain upgrades to existing pumping stations) will provide approximately 51,600 bpd of incremental pipeline capacity from the Williston Basin producing region to the Enbridge Clearbrook Terminal Facility by Dec. 09.

### **Keystone XL Pipeline – June, 2008**

TransCanada's Keystone XL Pipeline, announced in the summer of 2008 will transport crude oil 1,980 miles, from Alberta through Montana and on to Nebraska. The Keystone XL is 36" crude oil pipeline and it is an expansion proposal that would connect to the existing Keystone Pipeline; 281 miles of the line will be located in Montana. Total investment in Montana will be \$600 – 700 million and will result in state and local tax revenues of \$50 million annually. Permit applications are expected to be submitted in 2008.

### **Pathfinder Natural Gas Pipeline – June, 2008**

This energy infrastructure project, being developed by TransCanada, is a proposal for a natural gas pipeline to be built from the U.S. Rockies supply basins to markets in the U.S. Midwest. The 30" – 42" pipeline will move gas north-eastward from the Rockies supply basins, through the southeast corner of Montana, to connect to the Northern Border Pipeline Company system for delivery into the U.S. Midwest. The scheduled in-service date is November 2010.

## **Manufacturing Plants**

### **Chafin/Fuhrländer Wind Turbine manufacturing plant—March, 2008**

Chafin/Fuhrländer, an LLC of Jon Chafin and the Fuhrländer AG of Germany, announced they will build a manufacturing plant in Butte to produce 2.5 MW wind turbines. The initial phase would employ 150 people, and the plant could create an additional 600 jobs if they decide to expand and build the 150 foot blades at the site. Construction is expected to commence in 2009.

## **Coal-to-Liquid Plants**

### **Malmstrom CTL -- October, 2007**

The US Air Force is working with private industry and the state to develop a 25,000 barrel per day CTL plant at Malmstrom Air Force Base in Great Falls. The Air Force held an industry day open house in January of 2008 and requested qualifications and proposals from interested developers. Interested developers had until the end of May 2008 to submit proposals. The Air Force is currently evaluating the proposals received and in August 26 news story in the Great Falls newspaper stated "In the near future, a decision will be made in regards to Malmstrom and the coal-to-liquid initiative and possible facilities."

### **Many Stars CTL– August, 2008**

The Crow Tribe announced in August 2008 a partnership with the Australian-American Energy Co., a subsidiary of the Australian Energy Co., to build the Many Stars coal-to-liquid fuels plant outside of Crow Agency. The project would produce 50,000 barrels per day of diesel and other fuels. The \$7 billion plant would employ up to 4,000 during construction and would create 1,000 permanent jobs.

## **Bio-Fuel Plants**

### **Montola – Sustainable Systems – 2005**

This facility located in Culbertson currently produces cooking oil from Montana grow oil seed crops. Sustainable Systems of Missoula purchased the facility in 2005 with the intent of refurbishing the processing equipment and ultimately expanding the process to also produce biodiesel. The Montana Department of Commerce has provided this facility with more that \$1,000,000 in financial assistance in the form of low interest loans and grants.

### **Peaks & Prairies – 2005**

This plant located in Malta began operations in 2005 and currently produces bio-lubricants made from Canola and Camelina seed.

### **Fisher Biodiesel – 2006**

This biodiesel plant located in Chester began operations in 2006 and currently produces 100,000 gallons of biodiesel per year with plans to expand to 1 million

gallons per year. Current production uses Camellia seed for feed stock and product is marketed locally.

#### **MSU-Northern Bio-fuels lab – May, 2008**

This biofuels lab was opened in 2008 and is a state of the art facility located on the MSU-Northern campus in Havre. It tests organic fuel and lubricants to certify that they meet American Society for Testing and Materials standards. The lab can also test fuel additives to see if they will improve fuel quality. Northern will test samples from farmers and post test results on a Web site before it's added to expensive machinery.

#### **AE Biofuels – August, 2008**

AE Biofuels, a California based company, working in conjunction with Montana Microbial Products, a Montana based company, opened a 9,000 square foot integrated cellulosic and starch ethanol commercial demonstration facility capable of producing 150,000 gallons of ethanol per year. A possible addition to expand capacity could produce 1.2 million gallons per year.

### **Oil Refinery Upgrades**

#### **Billings Area Refineries – 2005-2008**

Investments within the 4 last years at the Conoco Refinery stand at \$1 billion while the Exxon Refinery has invested \$90 million in improvements during that same time period. Meanwhile, CHS Inc. the long time Laurel refiner increased fuel production and recently added a 15,000 barrel per day coker, sulfur unit and upgraded process units throughout the refinery representing \$325 million dollars in investment. The project upgrades will increase annual production of gasoline by 80 million gallons. All told these add up to \$1.5 billion in improvements to the Billings area refineries since 2005.

#### **Montana Refining Co. – 2007-2008**

The 10,000 barrel per day Montana Refining Co. oil refinery in Great Falls, owned by Connacher Oil and Gas of Calgary, was recently upgraded with improvements to the boiler fuel system to reduce sulfur emissions, improvements to the wastewater treatment system, efficiency upgrades to reduce production obstacles and plans to increase hydrogen plant capabilities which is used to strip sulfur out of the heavy crude. The company is planning a \$400 - \$500 million expansion to 25,000 barrels per day with a feasibility study to be completed January 2009. They expect filing for the permits to expand production in June 2009.

## **Mines**

### **Coal Mines**

#### **Spring Creek – 2005-2007**

The Spring Creek Mine located near Decker has increased production from 13.1 tons to 15.7 tons per year between 2005 and 2007.

#### **Signal Peak (Bull Mountain) – July, 2008**

This new mining operation was announced in July 2008. Signal Peak, located near Roundup, is Montana's only underground mine and is one of the most significant contiguous coal reserves in the United States. The new mine is poised to be the most productive single long-wall mining operation in the nation, with an estimated 15 million tons of coal to be produced per year. According to the companies, the estimated cost to fully develop the mine is \$450 million, including a new coal preparation plant, and the costs associated with constructing a 35-mile rail spur to the Burlington Northern Santa Fe railway line near Broadview. Construction of the rail spur began in July 2008 and is expected to be completed in 2009.

#### **Nelson Creek – 2008**

Great Northern Properties has indicated it will be submitting a permit in 2008 for a new mine for this site located near to Circle. The company has been studying the feasibility to construct a mine mouth coal gasification plant at this site similar to a project they currently are developing in North Dakota.

#### **Carpenter Creek – September, 2008**

This 250 million ton reserve contains high BTU coal (10,800 - 11,000) located between Musselshell and Melstone. The developers propose building a 25 mile long rail line to Custer and would operate this as a surface mine. The developer is preparing to submit a mining permit application to MDEQ possibly in 2008. The developer is looking to export this coal with annual production in the range of 4 to 4.5 million tons per year and will employ 50 workers.

### **Hard Rock Mines**

#### **Revett minerals – June, 2008**

Revett Minerals Inc. through its subsidiaries owns and operates the Troy Mine, and the development stage Rock Creek Project, both of which are located in Sanders and Lincoln Counties. These projects host significant copper and silver



mineral reserves. Company officials commented in August 2008 that *"We continue to be pleased with the strong earnings and cash generation that was achieved by Troy over the past three months coupled with a continuing excellent environmental record and an excellent safety record by all employees."* The company announced in June 2008 that it has commenced preliminary work at its Rock Creek exploration and evaluation stage property.

#### **Montanore – September, 2008**

This proposed mine will be located near Libby. The project is currently in permitting and the preliminary draft of the EIS is expected to be released late in 2008 and the company anticipates a record of decision in the 3<sup>rd</sup> quarter of 2009.

## **Initiatives and Tax Incentives**

### **Initiatives**

#### **The 20x10 and 30 MPG Initiatives – November, 2007**

Governor Schweitzer has challenged all state agencies to reduce energy consumption by 20 percent by the end of 2010 after receiving a report from the Climate Change Advisory Committee he had appointed in 2006. "Climate change is serious and Montana should lead by example," said Governor Schweitzer in his November 19, 2007 press release. "By setting a goal and working toward it, we can become leaders in addressing climate change. I would like to thank Director Richard Oppen, DEQ staff and the members of the Climate Change Advisory Committee for their hard work on the report." Governor Schweitzer is also asking agencies to apply a Montana CAFE (corporate average fuel economy) standard and move state vehicle fleets to achieve an average of 30 miles per gallon or better. "With the exception of industrial vehicles and pickups needed for state work, many of the vehicles in the state fleet could be more efficient."

#### **Two Montana-Alberta Oil and Gas Missions – 2005/ 2007**

Governor Schweitzer has traveled twice to Canada, once in 2005 and again in October 2007, in order to build partnerships to develop Montana energy and to entice Canadian companies with Montana's tax incentives.

#### **Oil and gas production tax agreement – 2008**

This agreement is between the Fort Peck Assiniboine and Sioux tribes and the State to split tax proceeds in order to encourage oil and gas production. The agreement was put in place to prevent native landowners from being taxed by both governments.

## **Tax Incentives**

### **2005 Wind Tax Incentives – April, 2005**

The establishment of class 14 properties resulting in a 50% reduction in property taxes for wind farms was adopted in 2005.

### **The Clean and Green – May, 2007**

The flagship legislation promoted by Governor Schweitzer during the 2007 legislative session was the “Clean and Green” tax incentives that are aimed at attracting new energy businesses to Montana. This comprehensive incentives package was passed in the 2007 special session and includes breaks (as much as 87%) for transmission lines, pipelines, energy generation, manufacturing facilities, biofuels and carbon sequestration.